Hormones and Behavior

EDITOR: Robert W. Goy
CO-EDITOR: Richard E. Whalen

ASSOCIATE EDITORS

Elizabeth Adkins-Regan
Arthur P. Arnold
Ronald J. Barfield
Michael J. Baum
Mei-Fang Cheng
David Crews
Adrian J. Dunn
Anke A. Ehrhardt
John Hutchison
Joseph W. Kemnitz
Edward J. Roy
Per Sodersten
James W. Truman
Pauline Yahr
Irving Zucker

VOLUME 24, 1990

ACADEMIC PRESS, INC.
Harcourt Brace Jovanovich, Publishers

San Diego New York Boston
London Sydney Tokyo Toronto

Copyright © 1990 by Academic Press, Inc.

All Rights Reserved

No part of this publication may be reproduced or transmitted in any form, or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (27 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1990 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

0018-506X/90 $1.50

MADE IN THE UNITED STATES OF AMERICA

Contents of Volume 24

Number 1, March 1990

ROBYN HUDSON, GABRIELA GONZÁLEZ-MARISCAL, AND CARLOS BEYER. Chin Marking Behavior, Sexual Receptivity, and Pheromone Emission in Steroid-Treated, Ovariectomized Rabbits 1

CHIA-HUNG HSU. Blockade of Lordosis by Androst-1,4,6-triene-3,17-dione (ATD) and Tamoxifen in Female Hamsters Primed with Testosterone Propionate 14

ROBERT F. MCGIVERN AND DIANE M. HENSCHEL. Interaction of Naltrexone with Postnatal Administration of Testosterone and Estrogen on Neurobehavioral Sexual Differentiation in Rats 20

JOSEPH TERKEL, JEFFREY A. WITCHER, AND NORMAN T. ADLER. Evidence for "Memory" of Cervical Stimulation for the Promotion of Pregnancy in Rats 40

CH. SCHAEFFER, J. ROOS, AND CL. ARON. Lordosis Behavior in Intact Male Rats: Effects of Hormonal Treatment and/or Manipulation of the Olfactory System 50

NORMAN ENDE, SHELDON B. GERTNER, AND BARBARA SOCHA. Unexpected Changes in Urinary Catecholamines and Vanillylmandelic Acid following Rape Assault 62

RICHARD P. MICHAEL, DORIS ZUMPE, AND ROBERT W. BONSALL. Estradiol Administration and the Sexual Activity of Castrated Male Rhesus Monkeys (*Macaca mulatta*) 71

JOHN C. WINGFIELD AND ARTHUR R. GOLDSMITH. Plasma Levels of Prolactin and Gonadal Steroids in Relation to Multiple-Brooding and Renesting in Free-Living Populations of the Song Sparrow, *Melospiza melodia* 89

BENGT SILVERIN AND ARTHUR R. GOLDSMITH. Plasma Prolactin Concentrations in Breeding Pied Flycatchers (*Ficedula hypoleuca*) with an Experimentally Prolonged Brooding Period 104

ELIZABETH ADKINS-REGAN AND MARY ASCENZI. Sexual Differentiation of Behavior in the Zebra Finch: Effect of Early Gonadectomy or Androgen Treatment 114

SUNNY K. BOYD AND FRANK L. MOORE. Evidence for GABA Involvement in Stress-Induced Inhibition of Male Amphibian Sexual Behavior 128

Number 2, June 1990

ERIC T. PLEIM, CHRISTINE A. LISCIOTTO, AND JOSEPH F. DEBOLD. Facilitation of Sexual Receptivity in Hamsters by Simultaneous Progesterone Implants into the VMH and Ventral Mesencephalon 139

ANNE D. MAYER, HARRY B. AHDIEH, AND JAY S. ROSENBLATT. Effects of Prolonged Estrogen–Progesterone Treatment and Hypophysectomy on the Stimulation of Short-Latency Maternal Behavior and Aggression in Female Rats 152
DANTE ZINI, CESARE CARANI, AUGUSTO BALDINI, ANNA GHIZZANI, AND PAOLO MARRAMA. Sexual Behavior of Men with Isolated Hypogonadotropic Hypogonadism or Prepubertal Anterior Panhypopituitarism 174
STEFAN HANSEN. Mechanisms Involved in the Control of Punished Responding in Mother Rats 186
T. A. VILLARS, M. S. ERSKINE, G. M. LAMBERT, D. JACOBSON, C. E. WEAVER, AND M. J. BAUM. Endocrine Correlates of Mating-Induced Reductions in Estrous Behavior in an Induced Ovulator, the Ferret 198
ROBIN CLOUES, CINDY RAMOS, AND RAE SILVER. Vasoactive Intestinal Polypeptide-like Immunoreactivity during Reproduction in Doves: Influence of Experience and Number of Offspring .. 215
ANTHONY L. GIORDANO, HARRY B. AHDIEH, ANNE D. MAYER, HAROLD I. SIEGEL, AND JAY S. ROSENBLATT. Cytosol and Nuclear Estrogen Receptor Binding in the Preoptic Area and Hypothalamus of Female Rats during Pregnancy and Ovariectomized, Nulliparous Rats after Steroid Priming: Correlation with Maternal Behavior 232
JENNIFER LOVEJOY AND KIM WALLEN. Adrenal Suppression and Sexual Initiation in Group-Living Female Rhesus Monkeys 256
G. GRAY EATON, JULIE M. WORLEIN, AND BARBARA B. GLICK. Sex Differences in Japanese Macaques (*Macaca fuscata*): Effects of Prenatal Testosterone on Juvenile Social Behavior 270
PIERRE DEVICHE, CATHERINE R. PROPPER, AND FRANK L. MOORE. Neuroendocrine, Behavioral, and Morphological Changes Associated with the Termination of the Reproductive Period in a Natural Population of Male Rough-Skinned Newts (*Taricha granulosa*) 284

Number 3, September 1990

ERIC T. PLEIM, PAMELA J. CAILLIAU, MARC A. WEINSTEIN, ANNE M. ETGEN, AND RONALD J. BARFIELD. Facilitation of Receptive Behavior in Estrogen-Primed Female Rats by the Anti-progestin, RU 486 301
RENEE J. PRIMUS AND CAROL K. KELLOGG. Gonadal Hormones during Puberty Organize Environment-Related Social Interaction in the Male Rat 311
T. EDWARD ORR AND DAVID R. MANN. Effects of Restraint Stress on Plasma LH and Testosterone Concentrations, Leydig Cell

LH/HCG Receptors, and *in Vitro* Testicular Steroidogenesis in Adult Rats 324
Anne D. Mayer, Maria A. Monroy, and Jay S. Rosenblatt. Prolonged Estrogen–Progesterone Treatment of Nonpregnant Ovariectomized Rats: Factors Stimulating Home-Cage and Maternal Aggression and Short-Latency Maternal Behavior 342
Margaret M. McCarthy. Oxytocin Inhibits Infanticide in Female House Mice (*Mus domesticus*) 365
Marie-France Bouissou. Effects of Estrogen Treatment on Dominance Relationships in Cows 376
Gerianne M. Alexander, Barbara B. Sherwin, John Bancroft, and David W. Davidson. Testosterone and Sexual Behavior in Oral Contraceptive Users and Nonusers: A Prospective Study 388
Joanne M. Pedersen, Stephen E. Glickman, Laurence G. Frank, and Frank A. Beach. Sex Differences in the Play Behavior of Immature Spotted Hyenas, *Crocuta crocuta* 403
Yasuhiko Kondo, Akira Shinoda, Korehito Yamanouchi, and Yasumasa Arai. Role of Septum and Preoptic Area in Regulating Masculine and Feminine Sexual Behavior in Male Rats 421
Brief Report
C. Carani, A. Scuteri, P. Marrama, and J. Bancroft. The Effects of Testosterone Administration and Visual Erotic Stimuli on Nocturnal Penile Tumescence in Normal Men.. 435

Number 4, December 1990

Carlos Kubli-Garfias. Chemical Structure of Corticosteroids and Its Relationship with Their Acute Induction of Lordosis in the Female Rat 443
J. Vega Matuszczyk, B. Silverin, and K. Larsson. Influence of Environmental Events Immediately after Birth on Postnatal Testosterone Secretion and Adult Sexual Behavior in the Male Rat 450
Barbara H. Fadem. The Effects of Gonadal Hormones on Scent Marking and Related Behavior and Morphology in Female Gray Short-Tailed Opossums (*Monodelphis domestica*) 459
Gisela Epple, Mary C. Alveario, and Anne M. Belcher. Copulatory Behavior of Adult Tamarins (*Saguinus fuscicollis*) Castrated as Neonates or Juveniles: Effect of Testosterone Treatment 470
J. J. Ford. Sustained Influence of Previous Estradiol or Testosterone Treatments on Sexual Behaviors of Female Pigs..... 484

Cheryl S. Asa, L. David Mech, Ulysses S. Seal, and Edward D. Plotka. The Influence of Social Endocrine Factors on Urine-Marking by Captive Wolves (*Canis lupus*) 497
Jacques Balthazart, Linda Evrard, and Chantal Surlemont. Effects of the Nonsteroidal Inhibitor R76713 on Testosterone-Induced Sexual Behavior in the Japanese Quail (*Coturnix coturnix japonica*) 510
R. E. Landsman, C. F. Harding, P. Moller, and P. Thomas. The Effects of Androgens and Estrogen on the External Morphology and Electric Organ Discharge Waveform of *Gnathonemus petersii* (Mormyridae, Teleostei) 532
S. Mechiel Korte, Jenneke Smit, Gerdien A. H. Bouws, Jaap M. Koolhaas, and Béla Bohus. Behavorial and Neuroendocrine Response to Psychosocial Stress in Male Rats: The Effects of the 5-HT 1A Agonist Ipsapirone 554
Cheryl A. Logan and John C. Wingfield. Autumnal Territorial Aggression Is Independent of Plasma Testosterone in Mockingbirds 568
Jörg Böhner, MarthaLeah Chaiken, Gregory F. Ball, and Peter Marler. Song Aquisition in Photosensitive and Photorefractory Male European Starlings 582
Announcement 595
Author Index for Volume 24 596